



**FPL** Energy

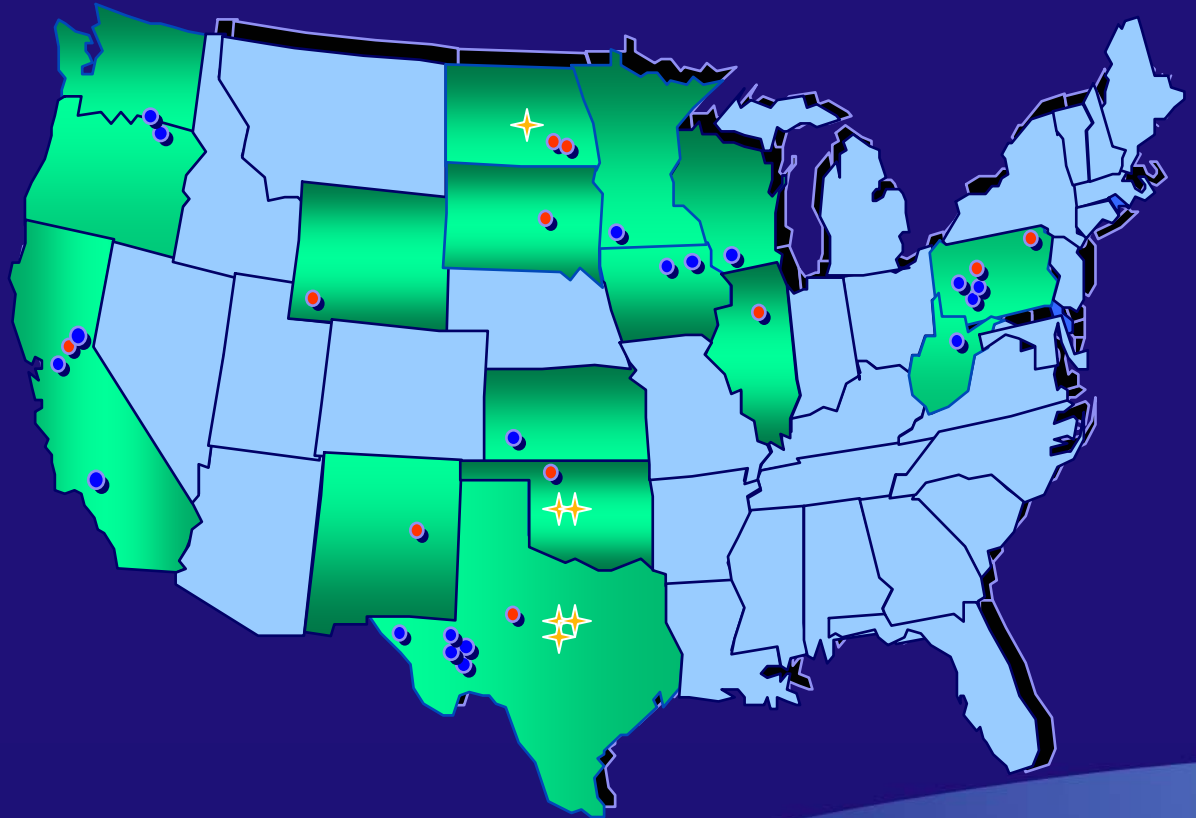
# Wind Farm Siting 101: *The Basics*

South Dakota Public Utilities Commission  
Regional Wind Conference

*September 12, 2005*

# FPL Energy: U.S. Leader in Wind Energy

- 3,000+ MW portfolio
- 50% U.S. market share 2001-04
  - Over 700 MW to be added in 2005
- Operations in 15 states



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# Projects in the Dakotas

## South Dakota

- Size: 40.5 MW capacity - 27 GE 1.5 MW turbines
  - All energy sold to Basin Electric Power Cooperative
- Location: Hyde County, South Dakota
- 10/03/03 commercial operation date

## North Dakota

- Size: 61.5 MW capacity - 41 GE 1.5 MW turbines
  - 40 MW PPA with Basin Electric Power Cooperative
  - 21 MW PPA with Otter Tail Power Company
- Location: LaMoure County, North Dakota
- 09/30/03 commercial operation date
  - Additional 49.5 MW project in construction in Burleigh County, ND
    - Expected to be complete in December 2005



Over 40% Net  
Capacity  
Factor



**FPL Energy**



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# What Makes a Great Wind Farm Site?



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# What Makes a Great Wind Farm Site?

- WIND



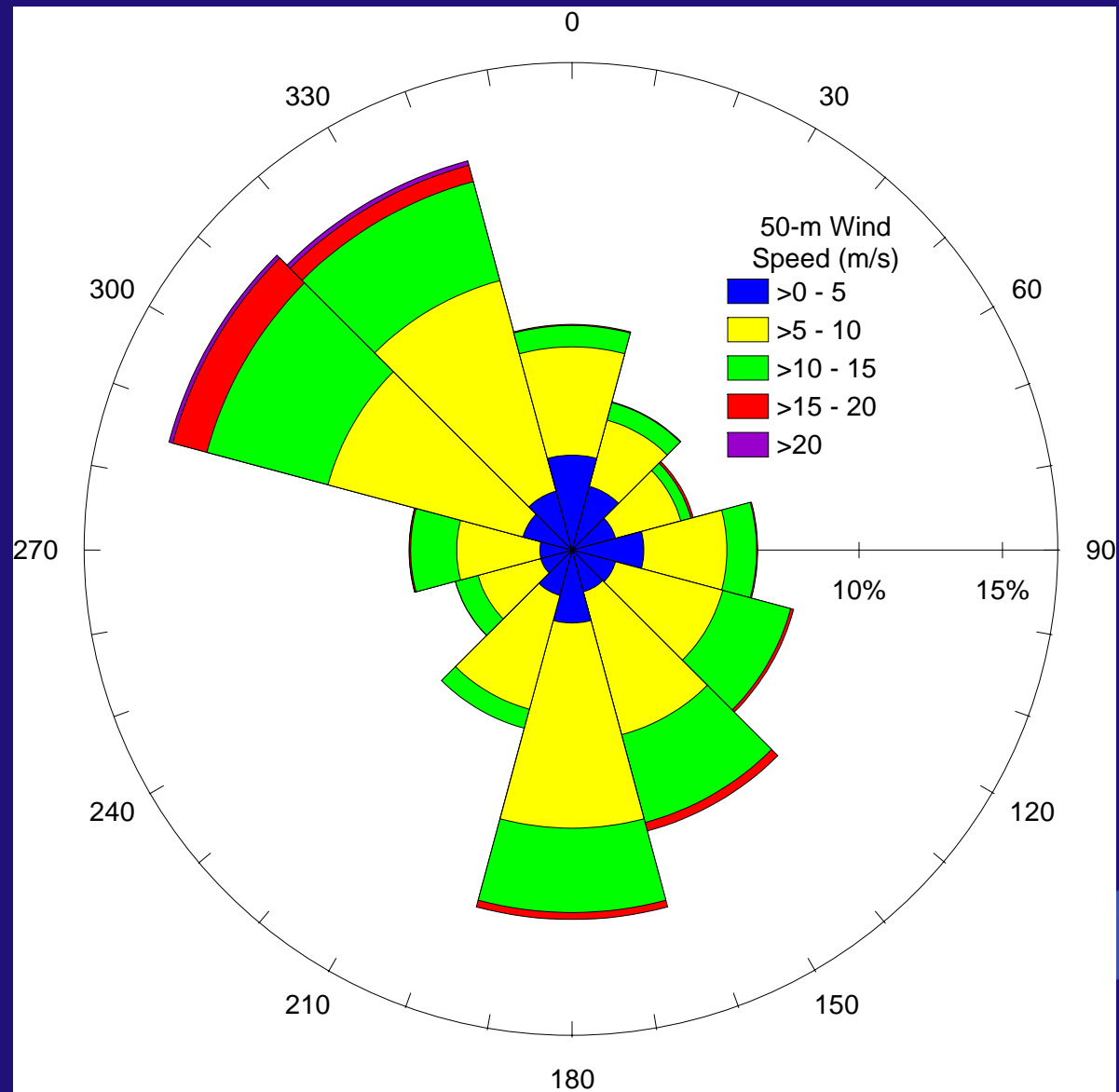
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# What Makes a Great Wind Farm Site?

- WIND
  - Average long term wind speeds greater than 8.7 mps at hub height
  - Measured over at least a two year period
    - Anemometers mounted at various heights on a free standing “met” tower or existing communications tower



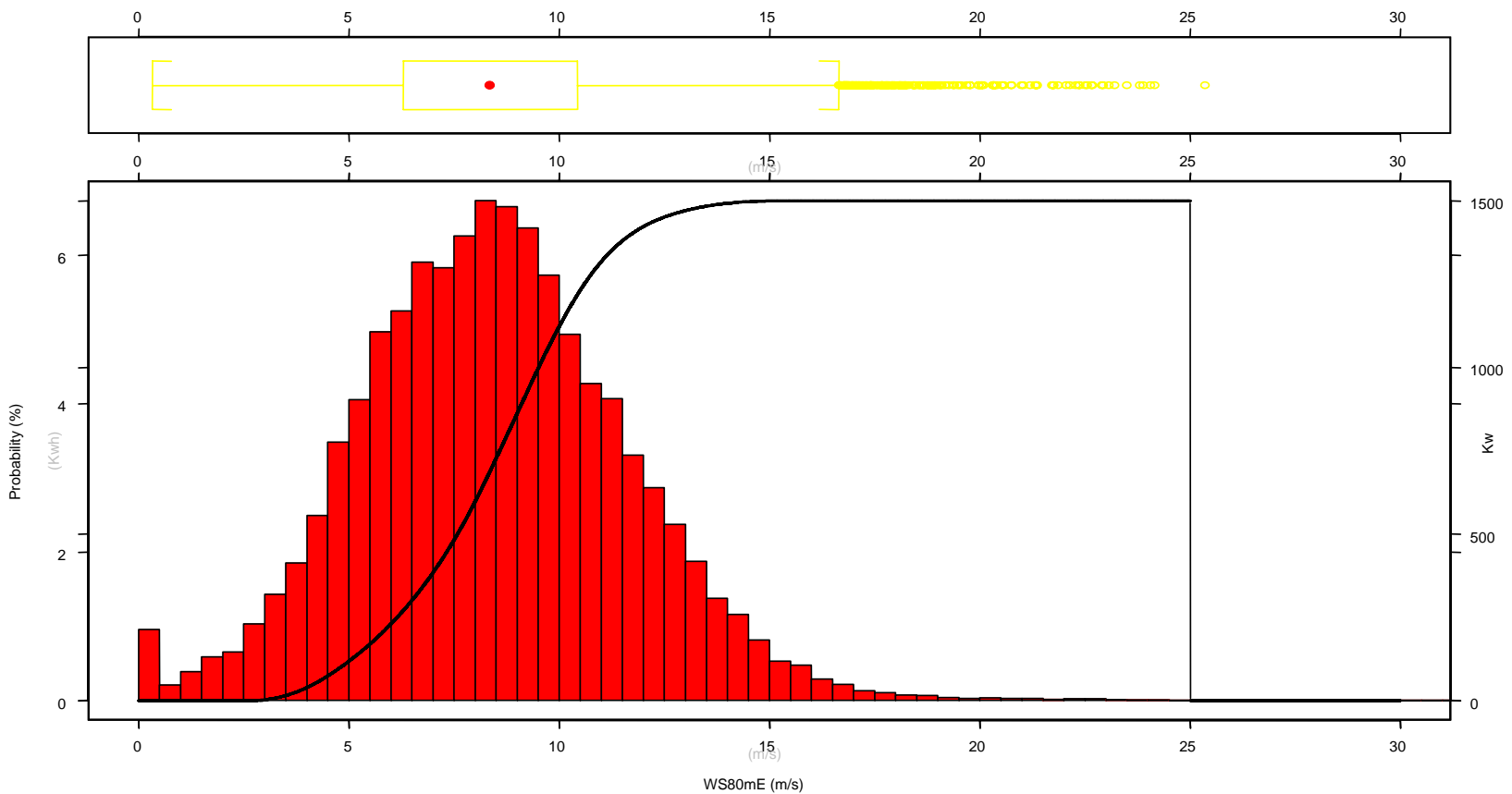
# Wind Rose



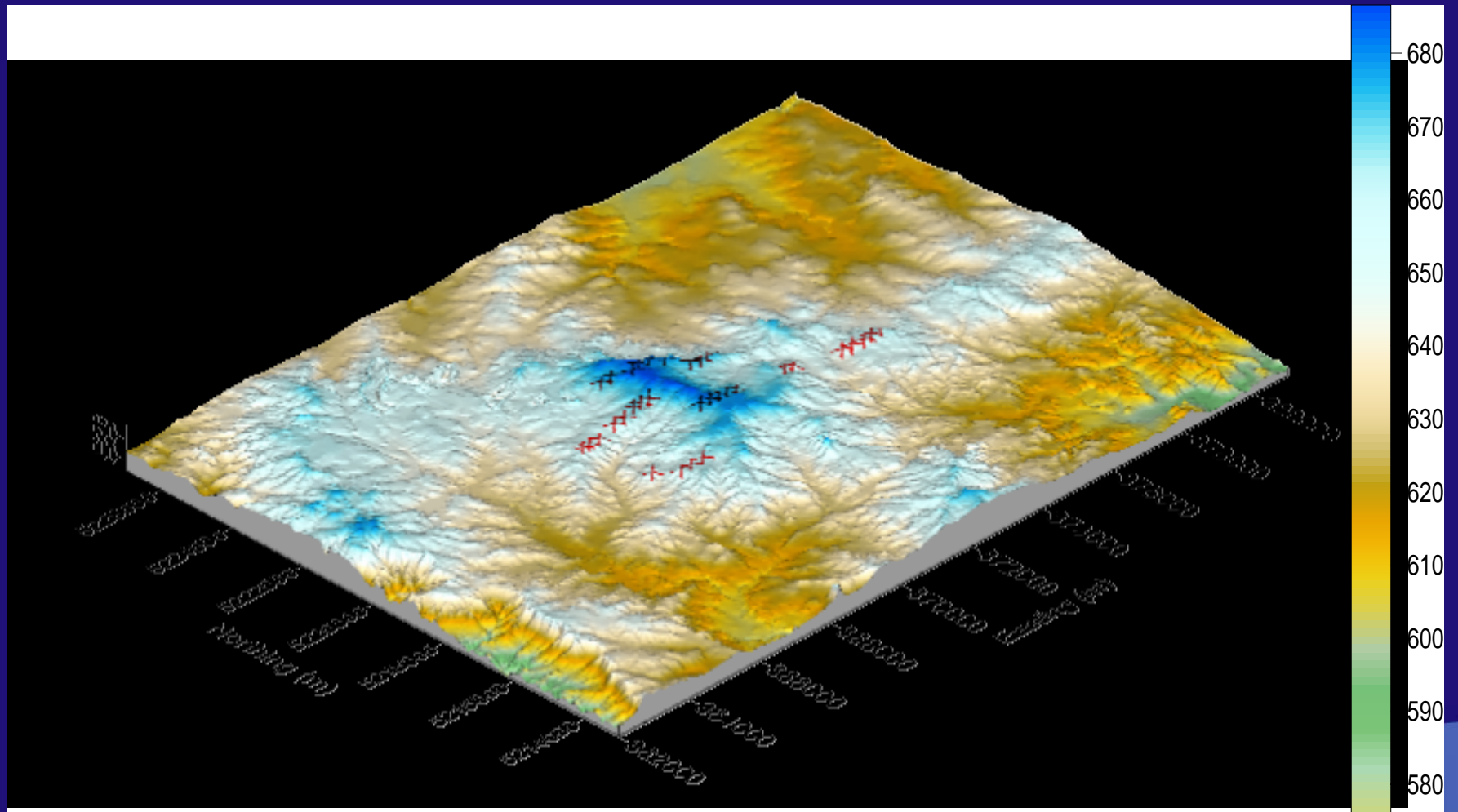
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# Frequency Distribution



# Project Array



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# What Makes a Great Wind Farm Site?

- WIND
  - Average long term wind speeds greater than 8.7 mps at hub height
  - Measured over at least a two year period
    - Anemometers mounted at various heights on a free standing “met” tower or existing communications tower
- Transmission
  - Proximity to transmission lines that have capacity
- Constructability



# Other Considerations When Siting

- State and local regulation
  - PUC Siting Requirements
    - In SD: Wind farms 100 MW or larger require siting
  - Local Zoning
    - Conformity to comprehensive plan
      - Variances
      - Setbacks

